FIG. 1

106a

106c

FIG. 2

~A

106a

106E

102

106A

101ℓ

106h   106c   106F

106e

101

106B

106B

106D

106 d

106

108A

106 f

106b

FIG. 3

108e

108c

108a

108h

108b

FIG. 4

A

108g

106B   106E   102

106A
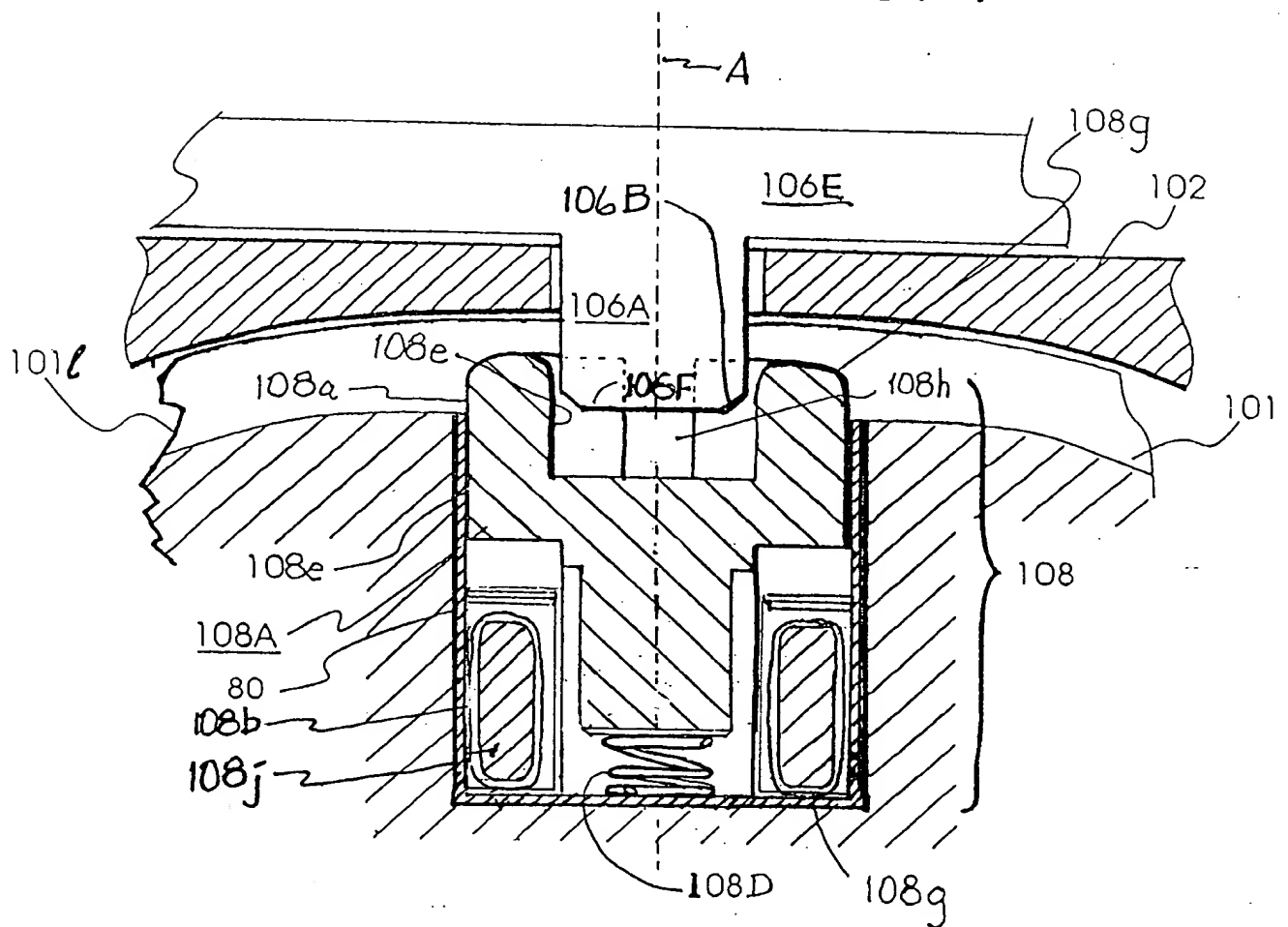
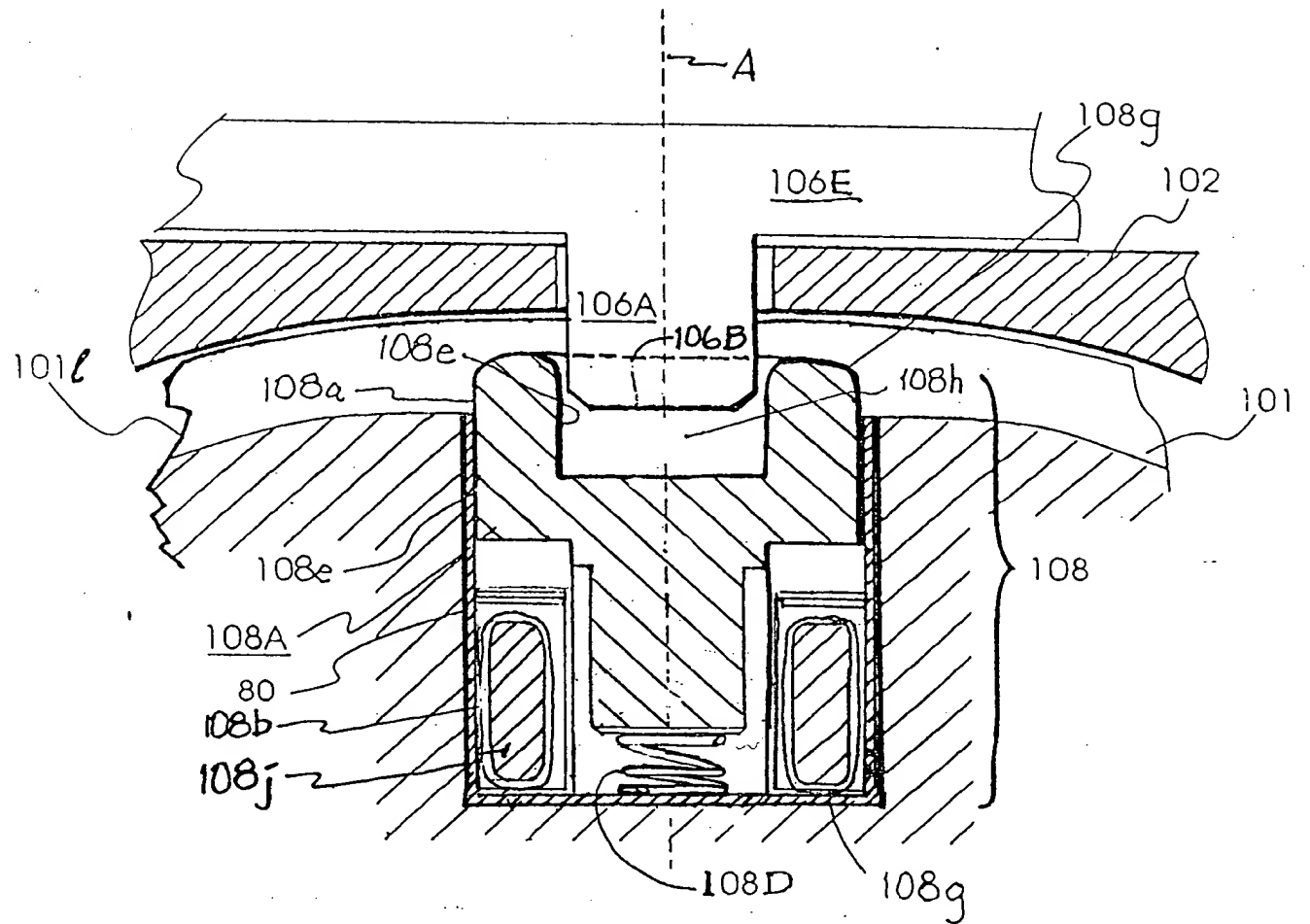101ℓ   108e   106F   108h   101
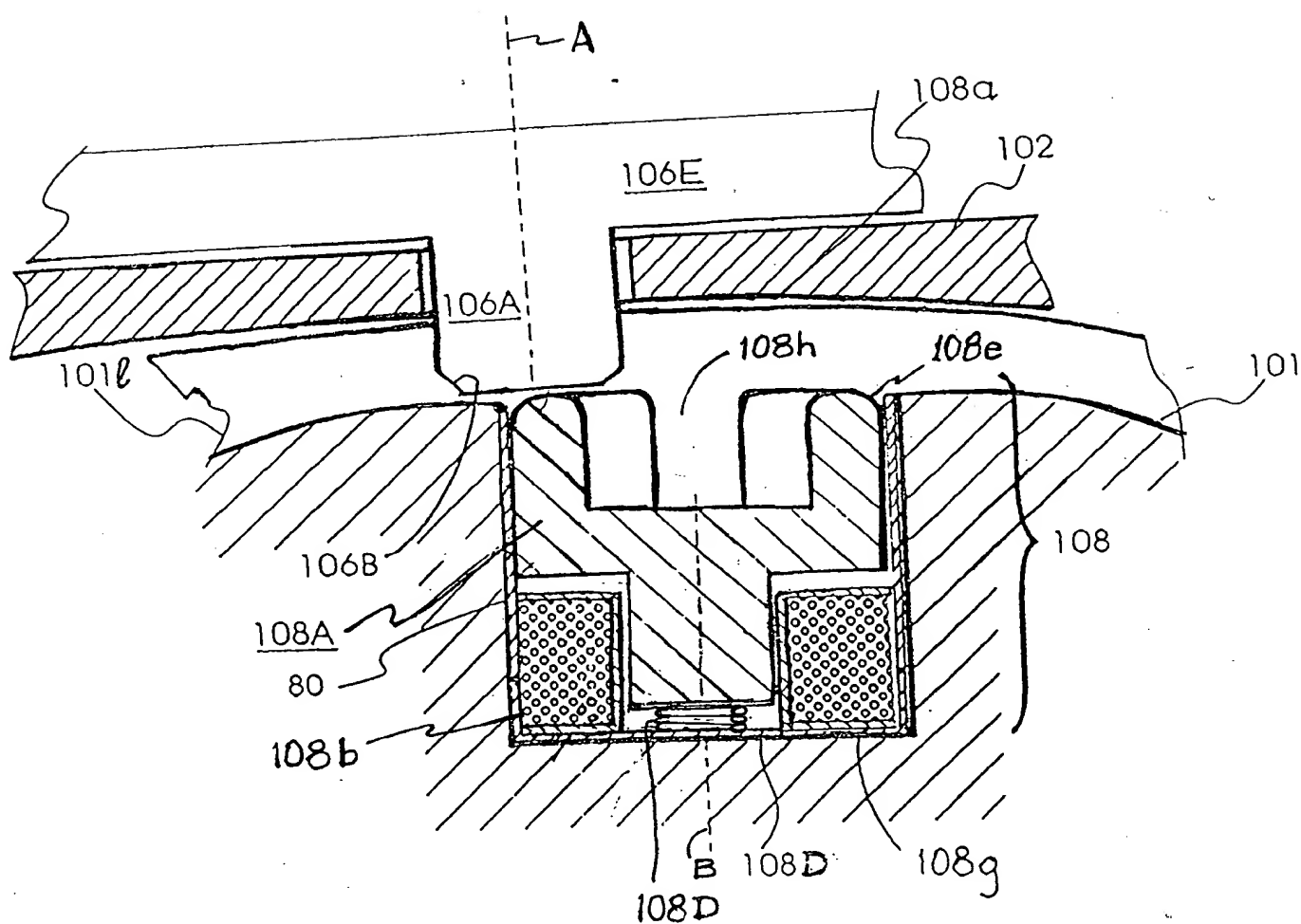
108a

108e   108

108A   108

80

108b

108j   108D   108g

FIG. 5A

FIG. 5B

FIG. 5C

FIG. 5D

FIG. 5E

FIG. 5F

107g

107a

107c

107e

FIG. 6

107a

102

107E

107A 107F

101ℓ

107h 107e

107c

101

107B

107D

107d

70

107f

107

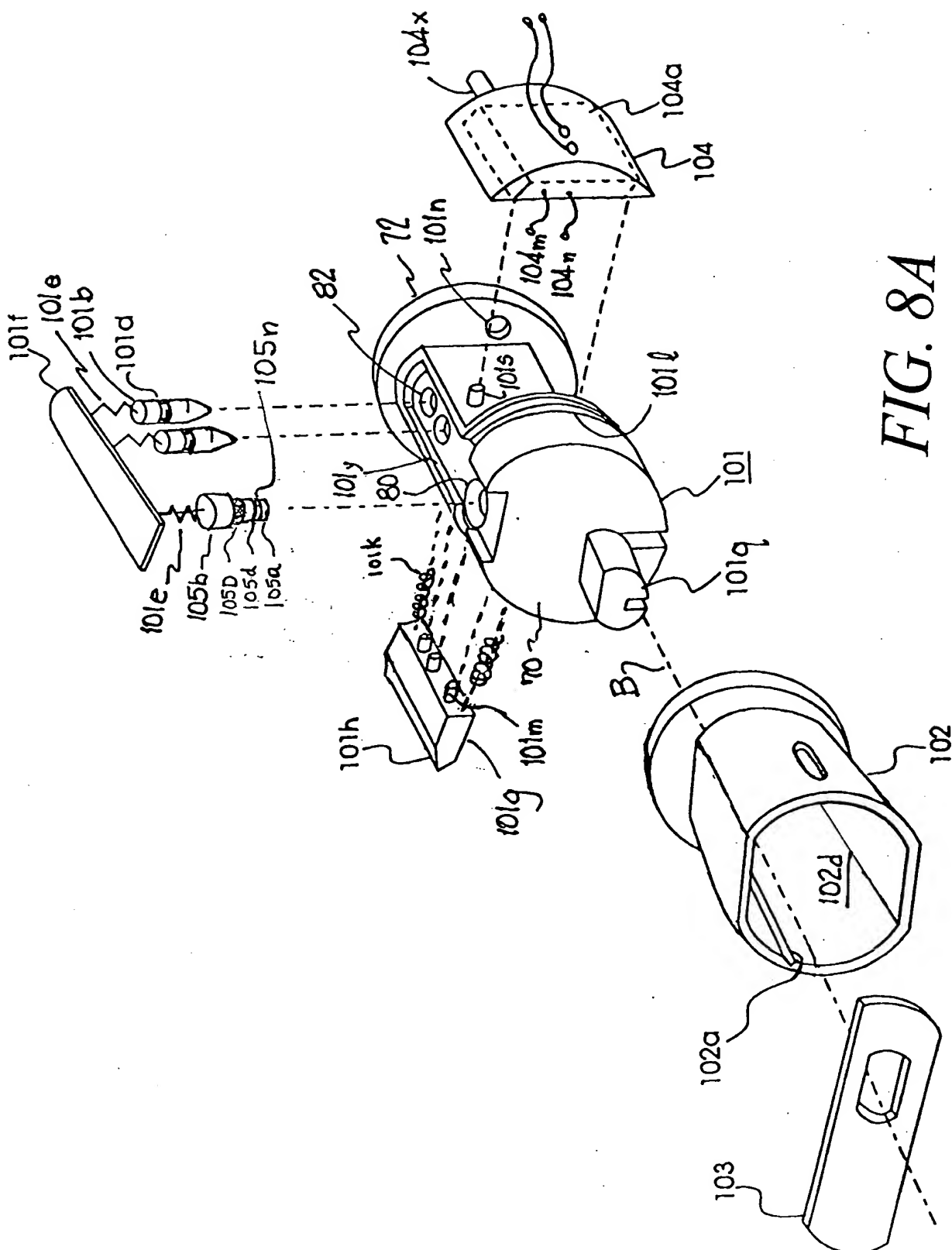107b

FIG. 7

FIG. 8A

FIG. 8B

FIG. 8C

FIG. 8D

FIG. 8E

105b ⌐

105 105

105d

105P

105a ⌐

105n

FIG. 8F

FIG. 8G

101f

101e

101P

101g

101

101N

101m

101k
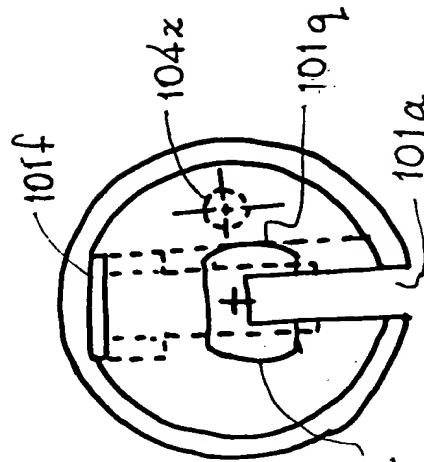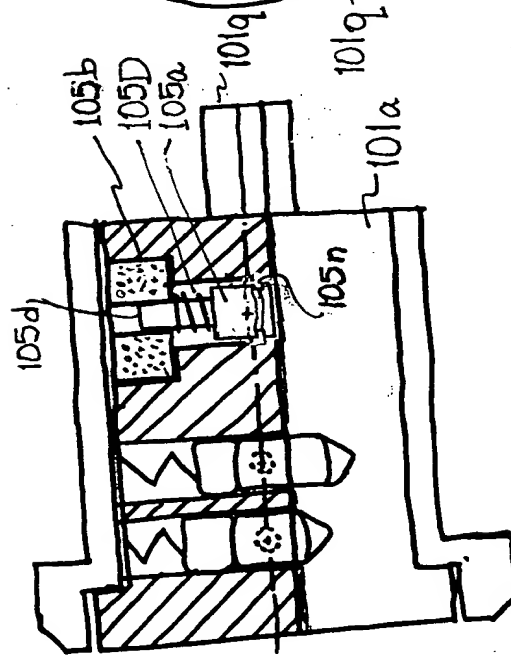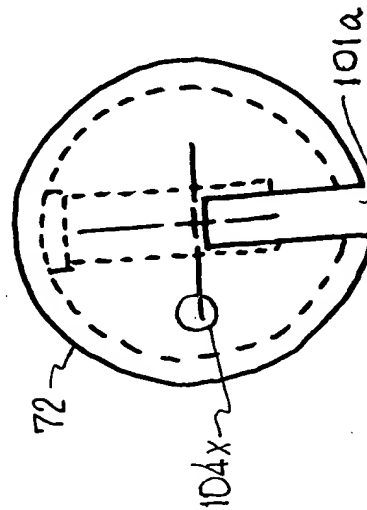
102

104

102a

101s

201A

101q

104
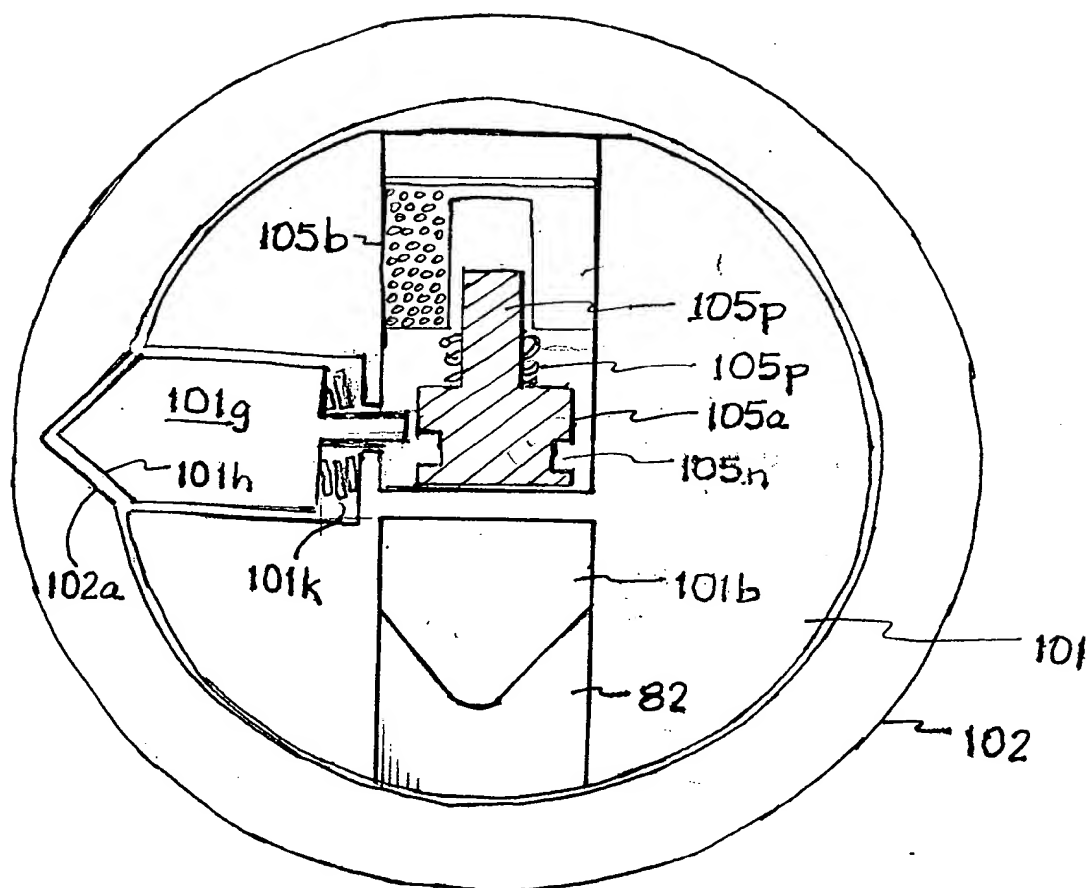
104B

202A

202B

201

103

201A

locking pin 201a

201b
coil

201

spring
201D

201B

FIG. 8H
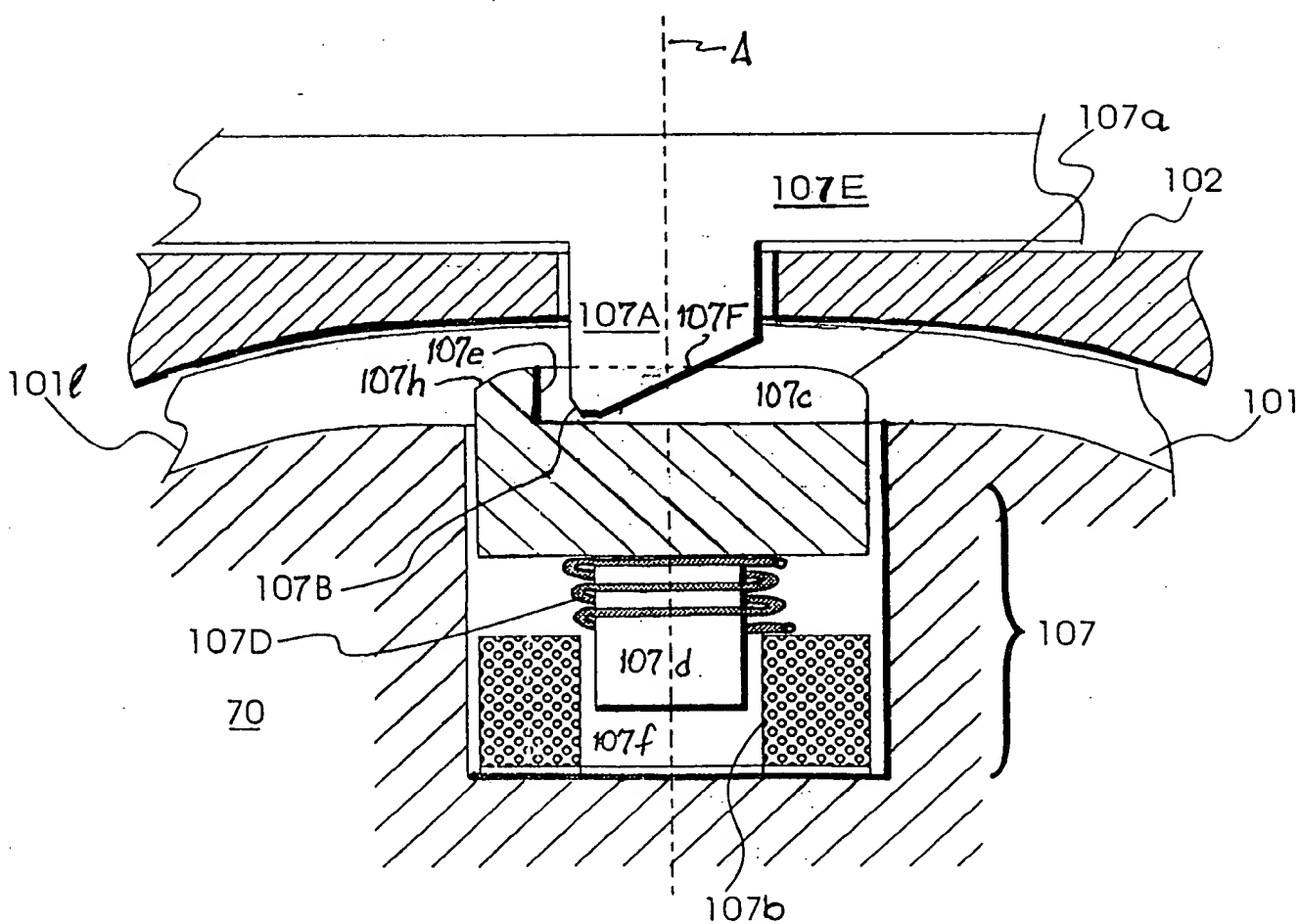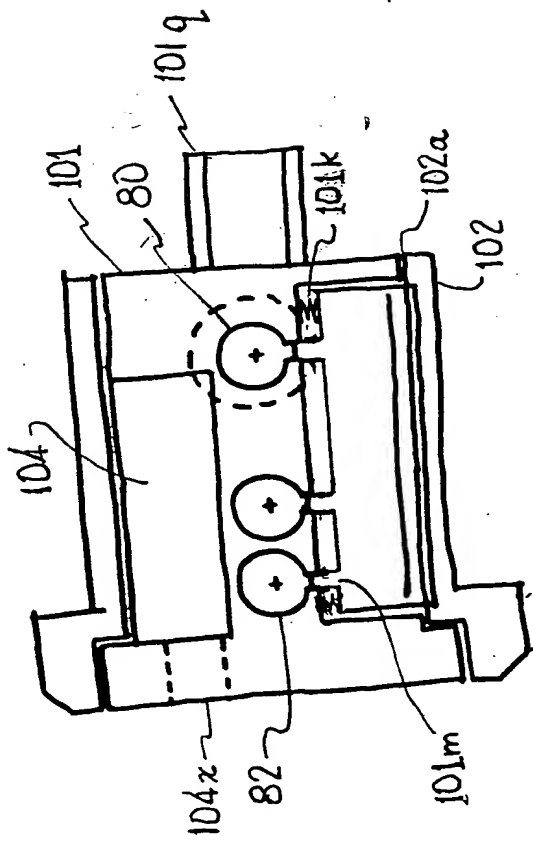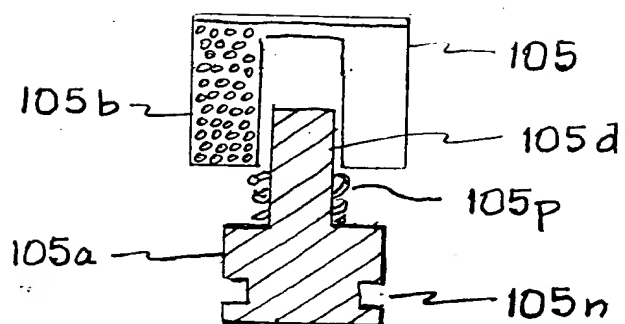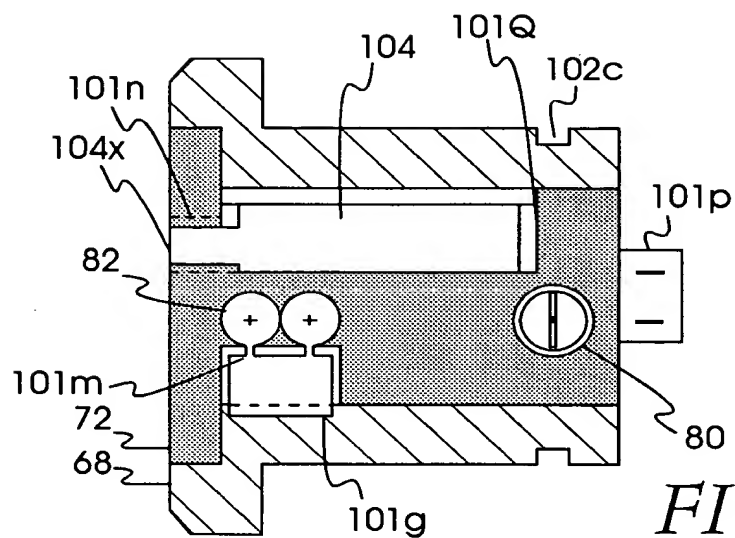
FIG. 9

FIG. 10

FIG. 12

FIG. 11

FIG. 13

FIG. 14

FIG. 15

FIG. 16

FIG. 17

202 200 104y

72 101a 106c 106b 104x 104b 104g

SIGNAL GENERATOR

I/O

I/O

μP KEY PAD

μP

ROM RAM

ROM RAM
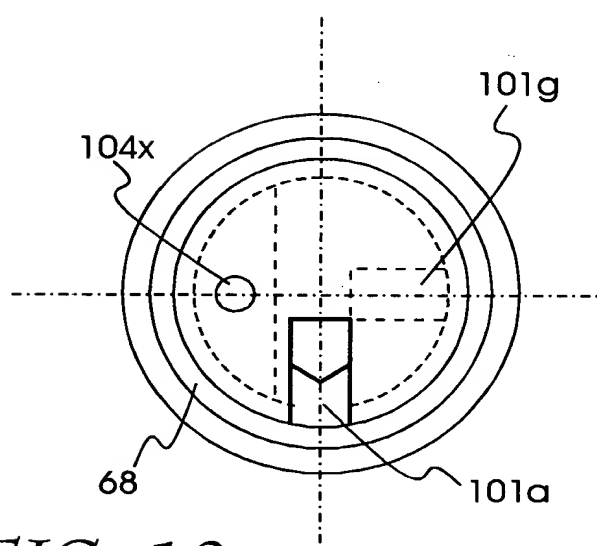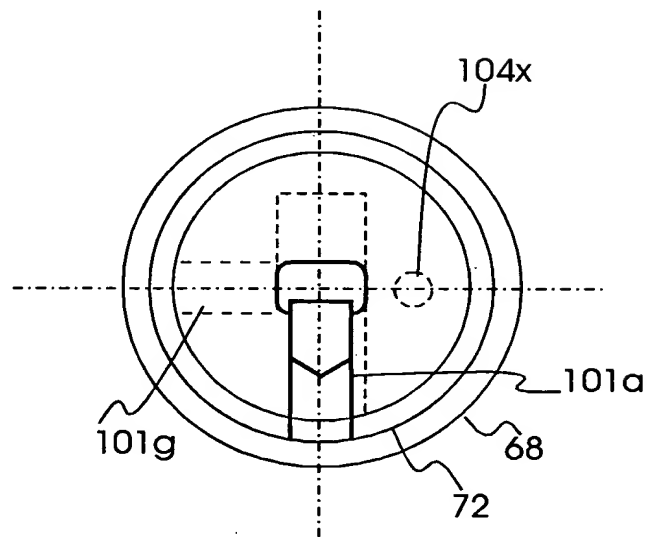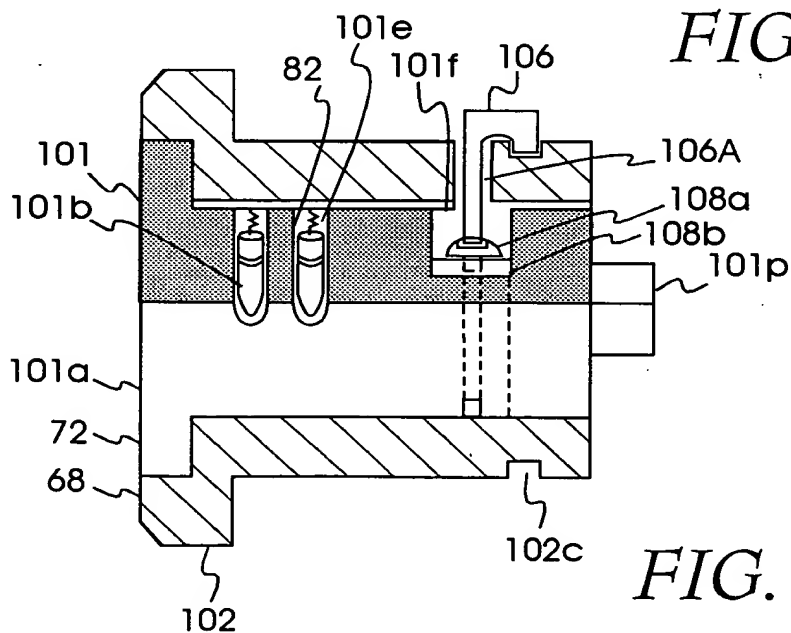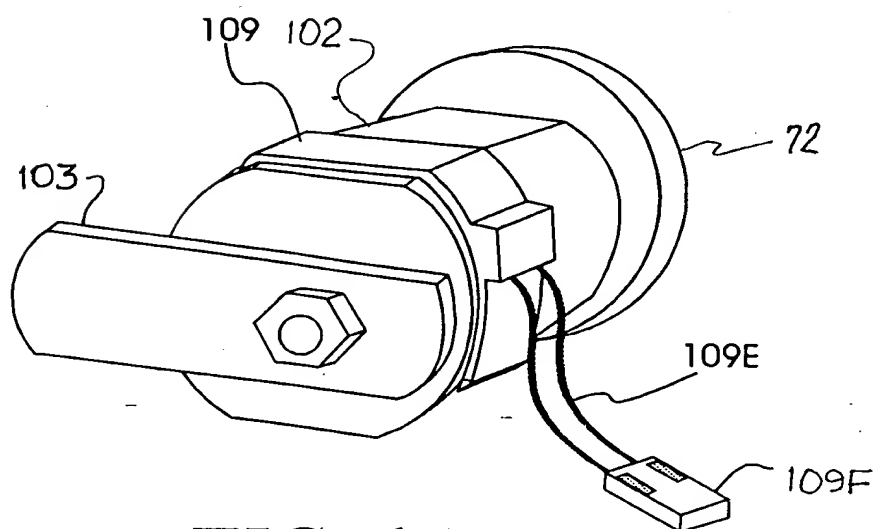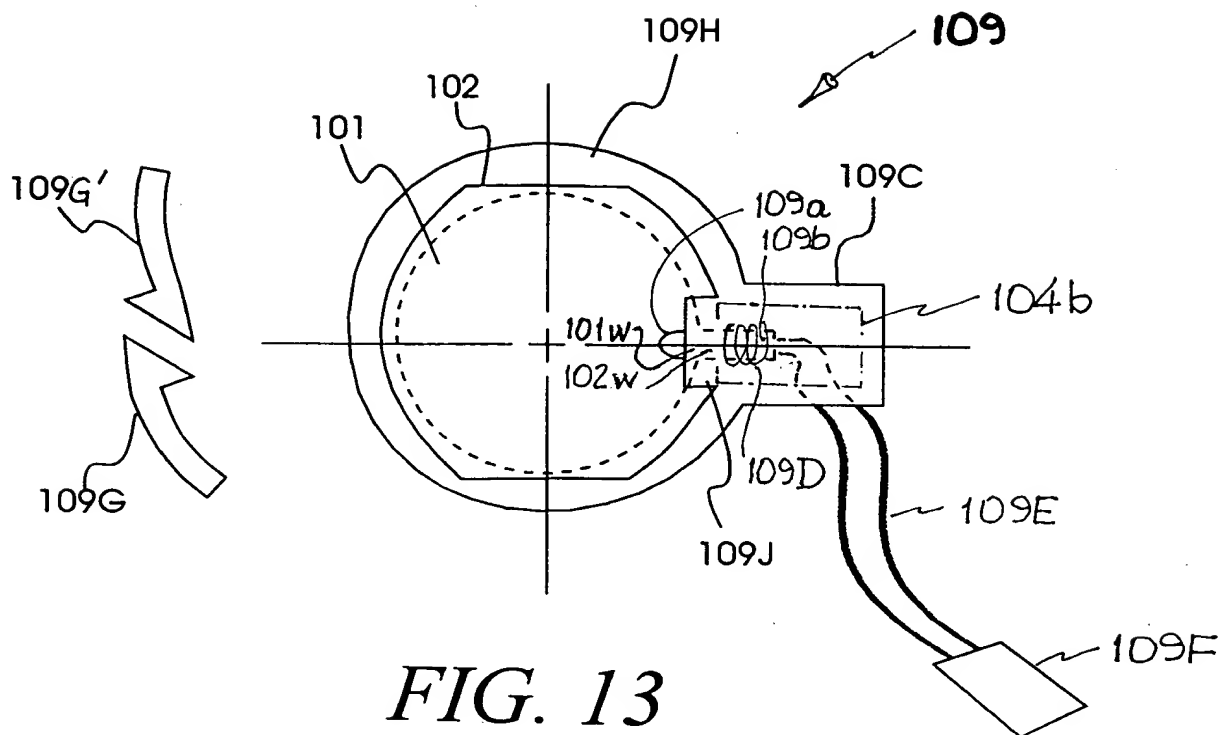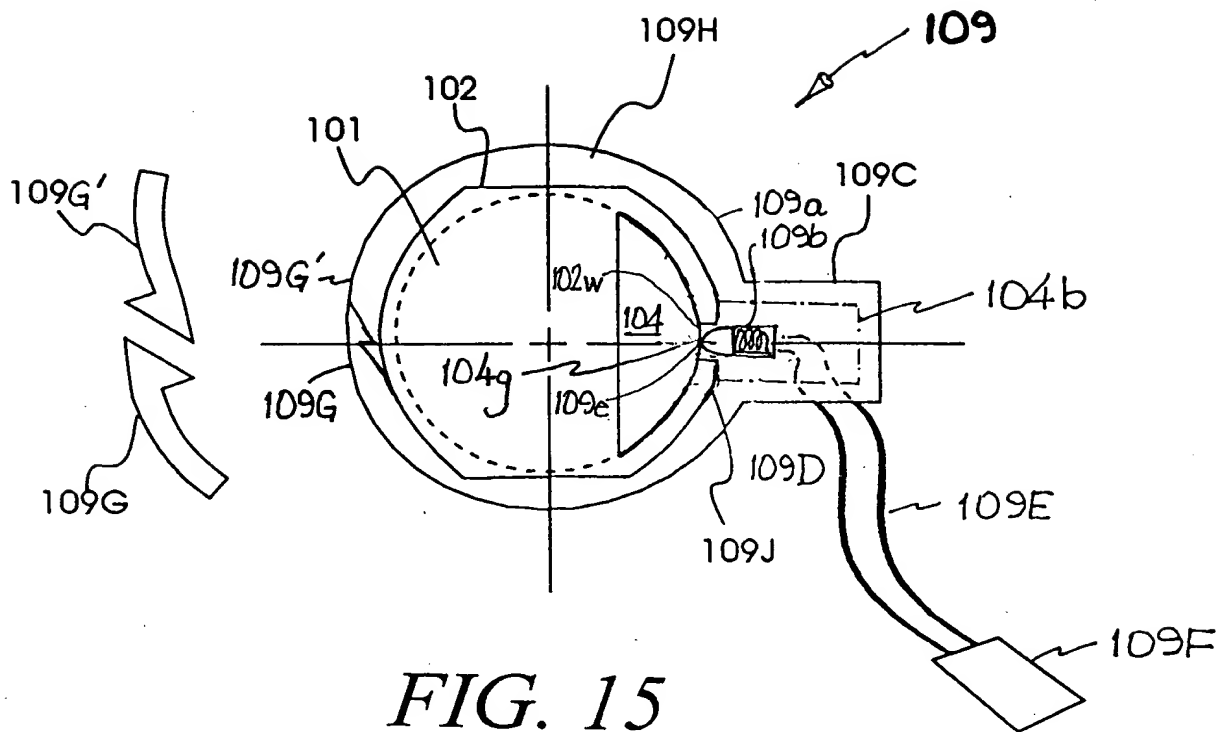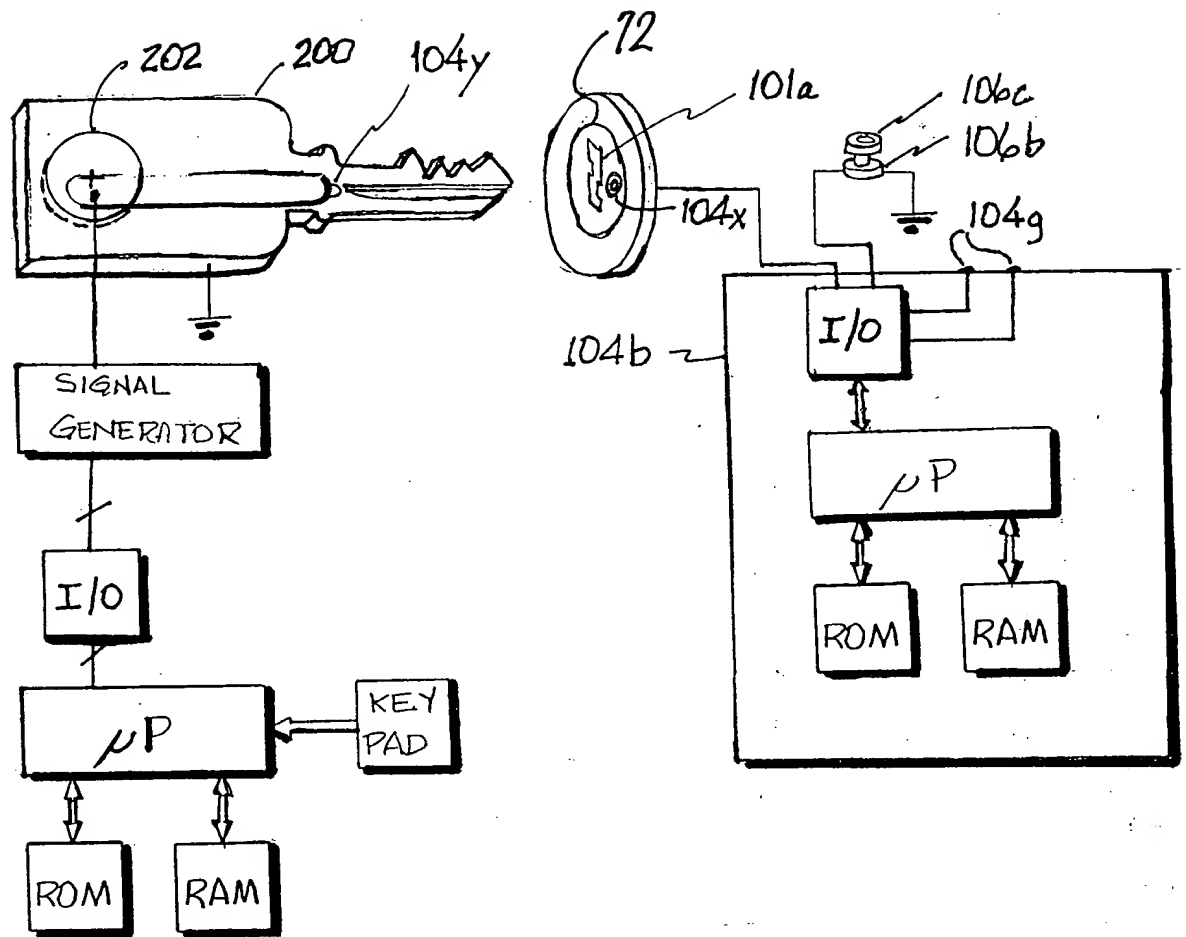
FIG. 18

New Hierarchy
Lock cylinder
system
Example # 1

Key Means Type
"C"

Key Means type "A"

Key means type
"B"

Host and
data
power
bus.

Lock	Type	State of blocking means
1	Offline electro-mechanical	active
2	Offline electro-mechanical	active
3	Offline electro-mechanical	active
4	Online electro-mechanical	active
5	Online electro-mechanical	active
6	Mechanical only	
7	Mechanical only	

FIG. 19

New Hierarchy
Lock cylinder
system
Example # 2

Key Means Type "C"
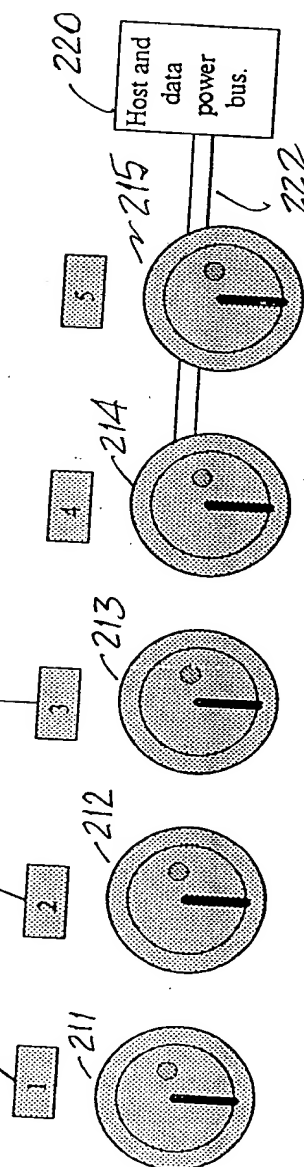
~210

~216

~217
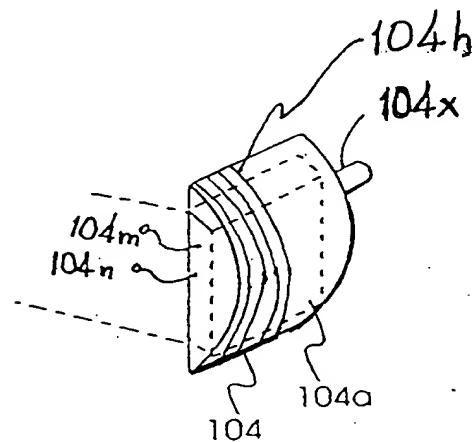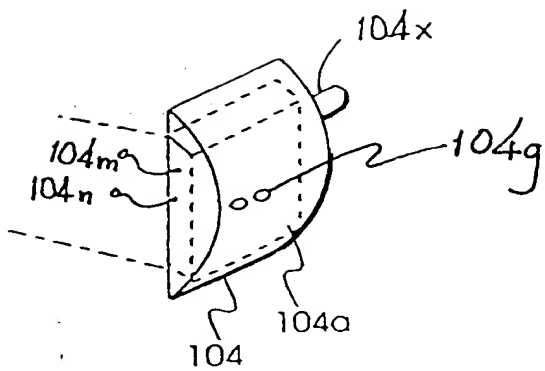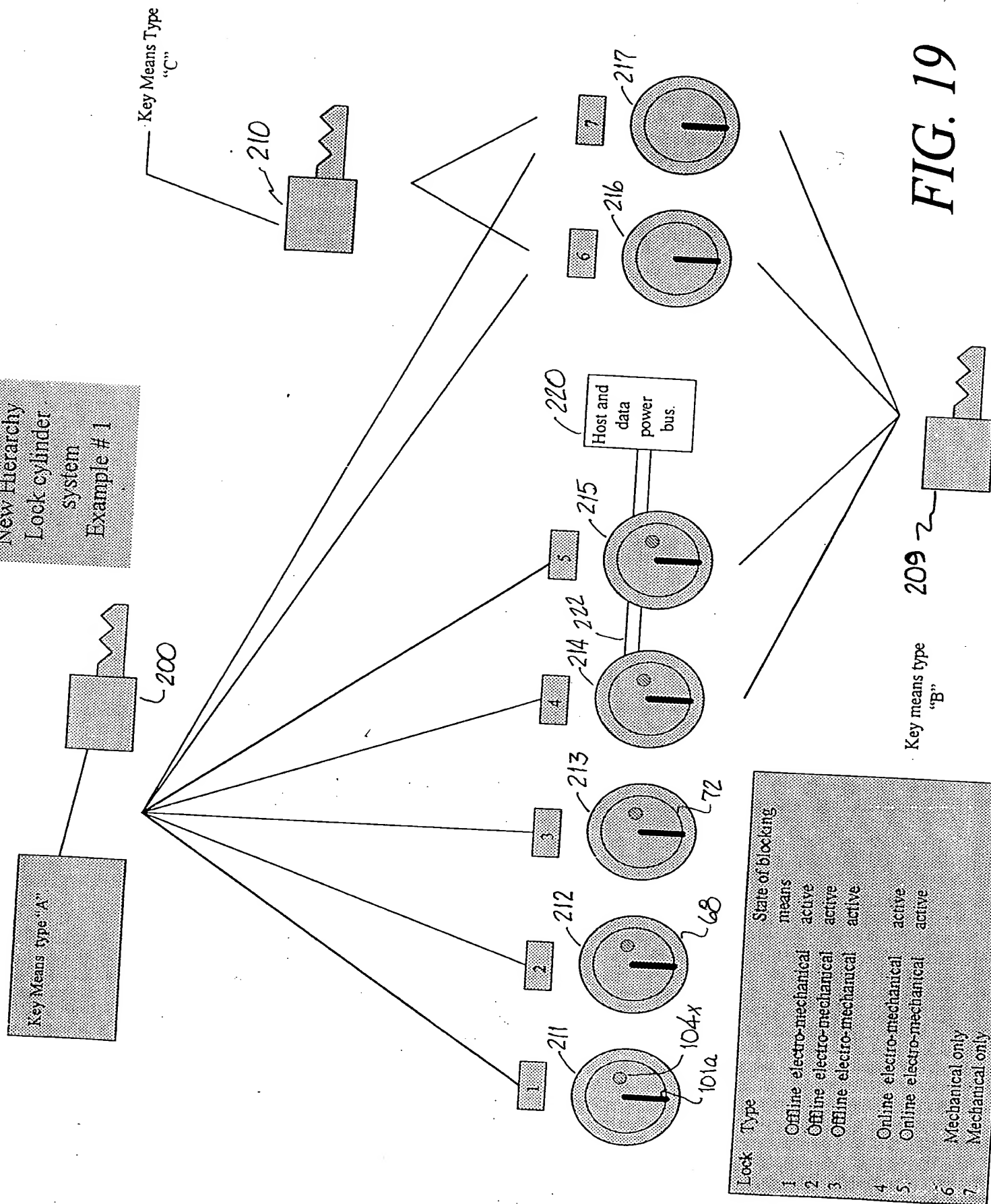
~200

Key Means type "A"

~220
Host and
data
power
bus.

~215

~214

~213

~212

~211

~222

~209

Key means type "B"

Lock Type	State of blocking means
1	Offline electro-mechanical active
2	Offline electro-mechanical active
3	Offline electro-mechanical active
4	Online electro-mechanical active
5	Online electro-mechanical active
6	Mechanical only
7	Mechanical only

FIG. 20

Key Means Type "C"

212

New Hierarchy
Lock cylinder
System
Example # 4

Host and
data
power
bus.

220

FIG. 21

Lock | Type | State of blocking means
1 | Offline electro-mechanical | bypassed
2 | Offline electro-mechanical | bypassed
3 | Offline electro-mechanical | bypassed
| |
4 | Online electro-mechanical | bypassed
5 | Online electro-mechanical | bypassed
| |
6 | Mechanical only |
7 | Mechanical only |

New Hierarchy
Lock cylinder
system
Example # 3

Key Means Type "C"

Key Means type "A"
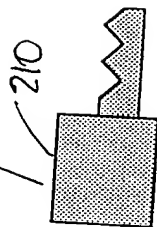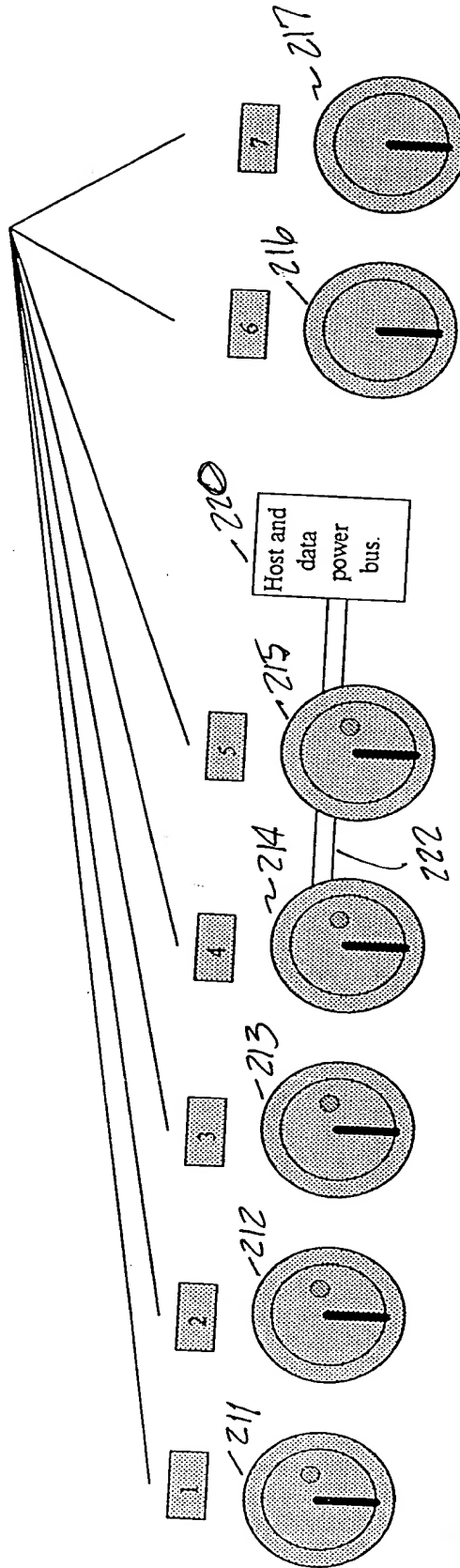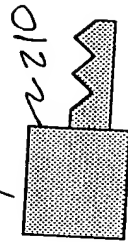
Key means type "B"

Host and
data
power
bus

Lock	Type	State of blocking means
1	Offline electro-mechanical	active
2	Offline electro-mechanical	active
3	Offline electro-mechanical	bypassed
4	Online electro-mechanical	bypassed
5	Online electro-mechanical	bypassed
6	Mechanical only	
7	Mechanical only	

FIG. 22